Figure 1A

5-O-dedesosaminyl-5-O-mycaminosyl-erythromycin B
$$R^1$$
= C_2H_5 R^2 = R^4 = R^5 = R^6 = R^7 = R^9 = -CH $_3$ R^3 = -H

$$R^{10} = CH_3$$

5-O-dedesosaminyl-5-O-mycaminosyl-erythromycin A
$$R^1=C_2H_5$$
 $R^2=R^4=R^5=R^6=R^7=R^9=-CH_3$ $R^3=-OH$ $R^8=$

$$R^{10} = CH_3$$

5-O-dedesosaminyl-5-O-mycaminosyl-erythromycin C
$$R^1$$
= C_2H_5 R^2 = R^4 = R^5 = R^6 = R^7 = R^9 = -CH $_3$ R^3 = -OH R^8 =

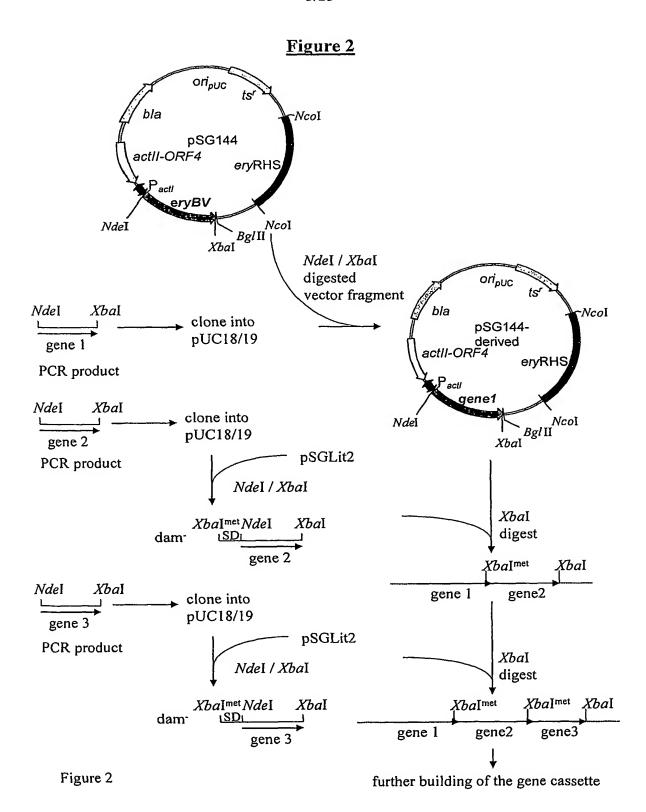
$$R^{10} = H$$

5

2/23

Figure 1B

5-O-dedesosaminyl-5-O-mycaminosyl-azithromycin $R^1=C_2H_5$ $R^2=R^4=R^5=R^6=R^7=R^9=-CH_3$ $R^3=-OH$ $R^8=-OH$ $R^{10}=CH_3$



4/23

Figure 3

TylA1.pep x u08223.em_pro2

5			
	1	MNDRPRRAMKGIILAGGSGTRLRPLTGTLSKQLLPVYDKPMIYYPLSVLM	50
10	1	MNDRPRRAMKGIILAGGSGTRLRPLTGTLSKQLLPVYDKPMIYYPLSVLM	50
10	51	LAGIREIQIISSKDHLDLFRSLLGEGDRLGLSISYAEQREPRGIAEAFLI	100
	51	LAGIREIQIISSKDHLDLFRSLLGEGDRLGLSISYAEQREPRGIAEAFLI	100
15	101	GARHIGGDDAALILGDNVFHGPGFSSVLTGTVARLDGCELFGYPVKDAHR	150
	101		150
20	151	YGVGEIDSGGRLLSLEEKPRRPRSNLAVTGLYLYTNDVVEIARTISPSAR	200
20	151	YGVGEIDSGGRLLSLEEKPRRPLEP.GRHRLYLYTNDVVEIARTISPSAR	199
	201	GELEITDVNKVYLEQGRARLTELGRGFAWLDMGTHDSLLQAGQYVQLLEQ	250
25	200		248
	251	RQGERIACIEEIAMRMGFISAEQCYRLGQELRSSSYGSYIIDVAMRGAAA	300
30	249		298
30	301	DSRAQ 305	
	299	IIIII DSRAQ 303	

5/23

Figure 4

TylAII.pep x u08223.em_pro2

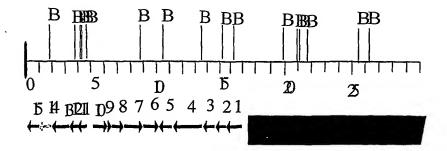
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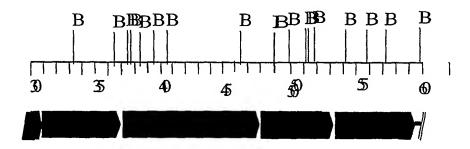
5 1 MRVLVTGGAGFIGSHFTGQLLTGAYPDLGATRTVVLDKLTYAGNPANLEH 50 1 MRVLVTGGAGFIGSHFTGQLLTGAYPDLGATRTVVLDKLTYAGNPANLEH 50 .0 51 VAGHPDLEFVRGDIADQALVRRLMEGVGLVVHFAAESHVDRSIESSEAFV 100 11111111111111 51 VAGHPDLEFVRGDIADHGWWRRLMEGVGLVVHFAAESHVDRSIESSEAFV 100 5 101 RTNVEGTRVLLQAAVDAGVGRFVHISTDEVYGSIAEGSWPEDHPLAPNSP 150 101 RTNVEGTRVLLQAAVDAGVGRFVHISTDEVYGSIAEGSWPEDHPVAPNSP 150 151 YAATKAASDLLALAYHRTYGLDVRVTRCSNNYGPRQYPEKAVPLFTTNLL 200 :0 151 YAATKAASDLLALAYHRTYGLDVRVTRCSNNYGPRQYPEKAVPLFTTNLL 200 201 DGLPVPLYGDGGNTREWLHVDDHCRGVALVAAGGRPGVIYNIGGGTELTN 250 :5 201 DGLPVPLYGDGGNTREWLHVDDHCRGVALVGAGGRPGVIYNIGGGTELTN 250 251 AELTDRILELCGADRSAVRRVAD RPGHDRRYSVDTTKIREELGYAPRTGI 300 251 AELTDRILELCGADRSALRRVADRPGHDRRYSVDTTKIREELGYAPRTGI 300 0 301 TEGLAGTVAWYRDNRAWWEPLKRSPGGRELERA 333 301 TEGLAGTVAWYRDNRAWWEPLKRSPGGRELERA 333

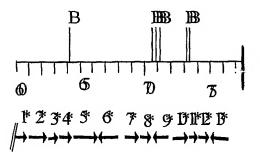
6/23

Figure 5

Figure 6







5	1	GGCATGCCTT	CGGGGTGTGC	GGCGGCGCCT	CAGAGCGTGG	CCAGTACCTC
	51	GTGCAGGGCC	GCGATCACCT	TGTCCTGTAC	GTCGGGCGCG	AGCCCCGGGT
10	101	ACATCGGCAG	CGAGAAGATC	TCGTCCGCCA	GCCGCTCCGT	CACCGGCAGC
	151	GAGCCCTTGG	CGTACCCCAG	GTGCGCGAAG	CCCGTCATGG	TGTGCACGGG
	201	CCACGGGTAA	CTGATGTTGA	GCGAGATCCC	GTACGACTTG	AGCGCCTCGA
15	251	TGATGTCGTC	CCGGCGCGGG	TGGCGGACGA	CGTACACGTA	ATACACGTGG
	301	TCGTTGCCCT	CGGTGACGGA	CGGCAGCACC	AGGCCGCCGG	GGCCCGTCAG
20	351	GTTCGCGAGT	CCTTCGGCGT	AACGCCGGGC	GACCGCGCGC	CGGCCCTCGA
20	401	TGTAGCGGTC	GAGGCGGGTG	AGCTTGCGGC	GCAGGATCTC	CGCCTGCACC
	451	TCGTCGAGCC	GGCTGTTGTG	GCCGGGCGTC	TGCACGACGT	AGTACACGTC
25	501	CTCCATGCCG	TAGTAGCGCA	GCCGGCGCAG	CGCACGGTCG	ACGTCCGCGT
	551	CGTCGGTCAG	CACGGCCCCG	CCGTCGCCGT	ACGCACCGAG	GACCTTCGTC
30	601	GGGTAGAACG	AGAAGGCGGC	GGCGTCGCCC	AGCGTGCCGG	CCAGCTCGCC
	651	GTGGTGGCGG	GCACCGTGCG	CCTGGGCGCA	GTCCTCCAGC	ACCACCAGGC
	701	CGTGCTGCTC	GGCCAGGGCG	CGCAAGGGCG	CCATGTCGAC	GCACTGCCCG
35	751	TACAGGTGCA	CCGGCAGCAG	GGCCTTCGTG	CGCGGGGTGA	TGACGTCCGC
	801	GACCTGGTCG	GTGTCCATGA	GGTGGTCCTC	GGCGCGGACG	TCGACGAAGA
40	851	CGGGCGTGGC	ACCGGTGCCG	TCGAT GGCCA	CCACCGTCGG	CGCGGCCGTG
	901	TTGGAGACGG	TGACGACCTC	GTCCCCCGGG	CCCACCCCGA	GCGCCTGCAG
	951	ACCCAGCTTG	ACGGCGTTGG	TGCCGTTGTC	GACACCGCCG	CAGTGGCGCA
45	1001	GGCCGTGGTA	GTCCGCGAAC	TCCTTCTCGA	ACCCGTCCAC	GCTGGGGCCG
	1051	AGGACCAACT	GCCCGGAGGC	GAAGACGGTC	TCGACGGCGT	CGAGGAGGTC
50	1101	CGCGCGTTCG	TTCTGGTATT	CCGCCAGGTA	GTCCCAGACG	TAGGTAGTCA
	1151	CGGAGAGCTC	AACCTCCAGA	GTGTTTCGAT	GGGGTGGTGG	GAAGCCGGTG
	1201	CGCGCGGACC	AGGTCGTGCC	AGCAGTCGCG	GACCGACTCC	CGCAGCGAAC
55	1251	GGCGCGGTGC	CCAGCCCAGC	AGGGCGCGCG	CCGCGCCGGT	GTCGACCCGC
	1301	AGCCAGTCCT	CCCGGTGCCC	GGGAGCCCGG	CCCGGAGCCG	GGCGCTCCAC
60	1351	CACCCGCGCC	GGAATGCCGC	TCGCCTCGAT	GAACAGGCCG	ACCAGGTCGC
- •	1401	GGACGGCGAC	CGCCTCGCCC	CGCCCGATGC	CGACGGCGAC	CGGGACGGCC

9/23

	1451	GGTGCGCGGG	CGGCGGCCAC	GACGGCGTCG	GCCACGTCCC	GCACATCGAC
5	1501	GTAGTCCCGG	TGCGCGCGCA	GCCGGGACAG	TTCCACGACG	GCCTCCGCAC
J	1551	CCGTCCCGGC	GGCCGCCAGC	AGCCGCTCGG	CGACCTGGCC	CAGCAGACTG
	1601	ATCCGCGGGG	TGCCGGGGCC	CGACACGTTG	GACACCCGTA	GCACCACACC
10	1651	GTCGACCCAC	CCGCCCGAGG	TGCCCCGCAG	CACCGCCTCG	CTGGCGGCGA
	1701	GCTTGCTCCT	GCCGTACGCC	GTGTCCGGGC	GCGGTACGGC	GTCGGCGCCC
15	1751	ACCGAACCGC	CGGGCGTCAC	CGGGCCGTAC	TCCAGTACCG	AGCCGAGGTG
13	1801	GACCAGCCGC	GGCCGCGCGG	ACATCAGCGC	CAGCGCCTCC	AGCAGGCGCA
	1851	GCGTGGGCAC	CGCGGTGGCG	GACCACATCT	GCTCGTCGGT	ACGGCCCCAG
20	1901	ATGCTTCCGA	CGGAGTTGAC	GATCGTGTCC	GGACGCTCCG	CGTCCAGGGC
	1951	GGCGGCCAGC	GCCGCGGGAT	CCGTACCGGC	CAGGTCCAGG	GTGACGCAGC
25	2001	GGTACGGCAT	CGGCTCCTCG	GCCGGCCGCC	GGCCCACCAC	CACCACGTCA
23	2051	CGGCCCCGCG	CGGCGAACGC	CGCGCACACA	TGCCGGCCGA	CGTACCCGGC
	2101	GCCGCCCAGG	ACCACGACGC	TGCCACTGCC	ACTGCCGCGC	GGCATCGGAT
30	2151	CGTTCACCAT				

5	11301	CGTCAGTACA	GCGTGTGGGC	ACACGCCACC	AGGGTGCGCA	GCTCGATGTT
-	11351	GAGGTAGTTG	CCGTGCGCCA	GCAGCCCGGT	GAGCTGACCG	AGCGACAGCC
	11401	AGGCGAAGTC	GTCCGGTGCG	TCCTCCGGGA	AGTCGTGCGG	GACCTCCACG
10	11451	ATCACGTAGC	GGTTCTGGGC	GTGGAAGAAG	CGCCCGCCCT	CCTCGGACTG
	11501	GACGGCGTCG	TAGCGCACGT	CCTGAGGCGG	CGCGGACAGC	ACGTCCTCCA
15	11551	GGTACGGCGG	GCCGGGCAGC	CCCCGCGGAC	CGGTGTGCTC	CTGTGGCCGG
13	11601	CACTGGACCG	TGGGGGCCAG	CTCGGCGACG	TTCAGGTGCC	CGACGTCCAC
	11651	CCGTGCCCGC	ACGAGCGCGT	GCAGCACGCC	GTCGACGGAC	TTGACCAGCA
20	11701	GCGCCATCAG	ACCCGGCAGC	CGCGGCTCGA	TGAGCGGCTG	CGTCCAGGAG
	11751	GTGACCTCCC	GGCTGCTGGC	GCTGACCTCG	GCGGCCATGA	CCCGGAAGTG
25	11801	CCGCCCGCTC	TCGTGGGCGA	TCTCGTGCGG	CGTGCGGTAC	CAGCCGTCCG
23	11851	CCGTCACCGT	ATCGAGCGGC	ACCCGGTTCT	GCACCAGCTC	CCGCAGGGCG
	11901	CGCACACCCG	TGAACCACGT	CAGGACCTCG	GCCGTCGTGT	GCCGCGCCGC
30	11951	ACCCGGCGAG	CCGAAGAAGG	AGCGCAGCAC	GGGGGACGGG	GCGGACGCGT
	12001	CGGCGTCCGC	CGTGGGCAGG	CAGGCGAGGA	TGGACCGGGC	GTCCATGTTG
35	12051	ACCACGTTGT	CCAGCATCAG	CAGCCGGCGG	AGCTGCCCCA	GCGTCAGCCA
33	12101	GCGGAAGTCC	TCCCCGATGT	CGAGGTCGTC	GTCCGCCGCC	AACTCGACGA
	12151	TCATGTTCCG	GTTGCGTTTG	GCCAGGACC A	AGTCCGCCTG	TCGGACTGG
40	12201	ATCGAGTCGA	CCAGGACACG	CGCCCGTCGC	GGCCCCATGA	ACAGGTCCAG
	12251	ATAGCGGATG	TCGCGCCCCC	GGTGCACCCC	GGTGAAGTTG	CTCCGGGTGG
45	12301	CCTGCACGGT	CGGCGACACC	TGAAGAACGT	TGACGTTCCC	GGGCTCCATC
	12351	TTGGCCTGCA	TCAGGAAGTG	CAGCACCCCG	TCGATCTCCC	GCGCCACGAT
	12401	CCCGAGCAGC	CCCACCTCCG	GCTGCACGAT	GATGGGCTGC	GTCCAGCCCC
50	12451	GCTCGGGCAG	CCGGTCCGTA	CGGACGTGCA	GCCCCTCCAC	GGAGAAGAAA
	12501	CGGCCCGACG	CGTGGTGCAG	GTTTCCCGTA	CCCGGGTGGA	AGCTCCAGCC
55	12551	GCGCAGCTCC	GCGAAGGGAA	CGCGGGACAC	GTCGAAGCGC	CCCGCCCGCA
- •	12601	GGCGTTCGGC	CAGCCAGCCG	GAGATGCCGT	CGAACGGCGT	GACCGCACTG
	12651	TCCGCGGTGC	GTGCCGACAC	CAGCACCCGC	CGCGCCGTGT	CCACCGGGTC
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	12751	GGGCGGATCG	CGGCGGTACG	GGTTCGCGGG	CGGTGTCCGC	GGCGGTGCGC
5	12801	GGCGGGACGG	GGCCGGTGCT	CGTGTCCGCG	GCGGTACGCG	GTGGGACGGT
	12851	CCCGGTGGCC	GTGTCCGCGG	TGGCCGTGCC	GGCGAGGGCG	TCGCCGATGG
	12901	TCCGGCACAC	CTCGTCCATC	CGGTCGTTCA	GATAGAAGTG	ACCGCCGGCG
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	13001	CTCCTCCAGC	GGGACATCGG	GATCACGGTC	ACCGGTGAGC	ACCGTGACCG
15	13051	GACAGTCCAG	CGCACCGCCG	GGCACATACG	CGTACGTGCC	CGCCGCCCGG
13	13101	TAGTCGTTGC	GGATCGCCGG	CAGGGCCAGC	CGCAGCAGCT	CCTCGTCCTG
	13151	GAGGACGGCG	TCCTCGGTGC	CCTGAAGCGT	GGCGATCTCC	GCGATCAGCG
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	13351	ACAGCGCGAG	CGGACGGTCG	GCCCAGCGCA	GGATCTCCGG	CACCACCTGG
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35	13551	ACCAGACGCA	GTTCCGGATC	CCGCACCGGG	CGGTAACGGC	GGACCCACAG
, -	13601	ACCCTCGTCC	GGGTGTCCGG	CCGGCGACGG	GGCTCCCGGA	ACGGGTGGTG
	13651	CGGAAGGGGT	GCTCACGGCG	GATCCAGCTC	CTCGCGGTCG	GGGGGACCGC
10	13701	TGTCGGGGAC	GGCACGTCGG	GTGCGGACGT	CGGGTACGGG	CGTCGGGGCG
	13751	TGACGGGGAG	GGACGGGGCG	GTCGGTCAGT	CGGTGCGCCG	GGCCTCCTGC
1 5	13801	GCGGCCTTCT	TCAGCGGTTC	CCACCACGCG	CGGTTCTCCG	CGTACCAGCG
	13851	CACCGTGTCC	GCCAGGCCCG	TCGTGAAGTC	CGTACGCGGG	GCATAGCCCA
	13901	GCTCGCCCGT	GATCTTGCCG	ATGTCCAGCG	CGTACCGCAG	GTCGTGCCCC
30	13951	GGCCGGTCGG	CGACGTGGCG	CACCGACGAG	GCGTCGGCAC	CGCACAGCCC
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	14151	GTACAGCGGC	ACCGTCAGAC	CGTCCAACAG	GTTCGTGGCG	AAGAGCGGGA
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	14301	CGACGCCGCC	TTCGAGGCGG	CGTACGGGGA	GTTCGGCGCC	AGCGGCTGCT
5	14351	CCTCGCGCCA	CGACCCCTCG	GCGATCGAGC	CGTACACCTC	GTCCGTGGAG
	14401	ACGTGGACGA	ACCGGCCGGC	CCCCGCCTCC	ACCGCGGCCT	GCAAGAGGAC
10	14451	TTGCGTCCCC	CGTACGTTCG	TCTCGACGAA	CGCCGACGCG	TCGGCGATGG
10	14501	AGCGGTCCAC	GTGCGACTCC	GCCGCGAAGT	GGACCACGAC	GTCCGCCCCC
	14551	CGCACGACCC	GGGACATCAC	CTCCGCGTCC	CGGATGTCGG	CGTGCACGAA
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20	14701	TACGCCCCGG	CCAGCAGTTG	TCTGACGAAG	TGCGAGCCGA	TGAAGCCCGC
20	14751	ACCTCCGGTG	ACCAGCAGCC	GCATGGGAGC	ACAGACCTTT	CTTCCAGGGA
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60	15751	GTCTTCGTCA	Т			

5	59800					G
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	60051	CGACGGGCTC	ACGGCCGACG	GGCGGCGCCC	CGGCGCGCGG	GAACTGCCGC
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25	60251	AGGCCGCCCT	GGCCGCCGAC	GGCACCGTCG	ACCTCGTCGA	CGCGTACGCC
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35	60501	GGCCGGCCGG	GCCCCGACG	CCGTCGCCGC	CGCCCGCACC	CTGGCCGTCG
	60551	CGGCCGCCGA	GCCCGCAGCC	ACCCTCGTCG	GCAACGCCGT	ACAGGAGCTG
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	60701	AGCGGCGGGT	CGCCCGCGAG	GACACGGACA	TCGCCGGGCA	GCGCCTCCCC
45	60751	GCCGGGGGGA	GCGTCGTGAT	CCTCGTCGCC	GCCGTCAACC	GCGCGCCCGT
	60801	ATCCGCGGGA	AGCGACGCCT	CCACCACCGT	CCCGCACGCC	GGCGGCCGGC
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50	60901	CCCGTGGCCG	CGCCCGGGCC	GTTCGGGCTC	CCCGGCGACC	TGCACTTCCG
	60951	CCTCGGCGGG	CCCCTGGTCG	GAACGGTCGC	CGAAGCCGCG	CTCGGTGCGC
55	61001	TGGCCGCACG	GCTCCCCGGT	CTGCGCGCCG	CCGGGCCGGC	CGTGCGGCGC
	61051	CGCCGCTCAC	CGGTGCTGCA	CGGACACGCC	CGCCTCCCCG	TCGCCGTCGC
60	61101	CCGGACGGCC	CGTGACCTGC	CCGCCACCGC	ACCGCGGAAC	TGAGGAGGGA
00	61151	GTGCCCCGAT	GCGTATCCTG	CTGACGTCGT	TCGCGCACAA	CACGCACTAC

	61201	TACAACCTGG	TCCCCCTCGG	CTGGGCGCTG	cgcgccgccg	GGCACGACGT
5	61251	ACGGGTCGCC	AGCCAGCCCT	CGCTGACCGG	CACCATCACC	GGCTCCGGGC
J	61301	TGACCGCCGT	CCCCGTGGGC	GACGACACGG	CCATCGTCGA	GCTGATCACC
	61351	GAGATCGGCG	ACGACCTCGT	CCTCTACCAG	CAGGGCATGG	ACTTCGTGGA
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	61451	TCATGTCGGC	CATGTGCTTC	TCGCCGCTGA	ACGGCGACAG	CACCATCGAC
15	61501	GACATGGTGG	CGCTGGCCCG	TTCCTGGAAA	CCGGACCTCG	TCCTGTGGGA
15	61551	GCCCTTCACC	TACGCGGGAC	CCGTCGCCGC	GCACGCCTGC	GGCGCCGCCC
	61601	ACGCCCGGCT	GCTGTGGGGT	CCCGACGTGG	TCCTCAACGC	ACGGCGGCAG
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25	61751	CGGACACGAT	CGAGGAACTG	TTCGCCGGGC	AGTGGACGAT	CGACCCCAGC
23	61801	GCCGGGAGCC	TGCGGCTGCC	GGTCGACGGC	GAGGTCGTGC	CCATGCGCTT
	61851	CGTGCCGTAC	AACGGCGCCT	CGGTCGTCCC	CGCCTGGCTC	TCCGAGCCGC
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	62051	CCGCCGGTCT	GCCCGGCAAT	GTGCGCGTCG	TCGACTTCGT	GCCGCTGGAC
	62101	GCCCTGCTGC	CGAGCTGCGC	CGCGATCGTC	CACCACGGAG	GCGCGGGAAC
40	62151	CTGTTTCACG	GCCACCGTGC	ACGGCGTCCC	GCAGATCGTC	GTGGCCTCCC
	62201	TCTGGGACGC	GCCGCTGAAG	GCGCACCAAC	TCGCCGAGGC	GGGCGCCGGG
45	62251	ATCGCCCTGG	ACCCCGGGGA	ACTGGGCGTG	GACACCCTGC	GCGGCGCCGT
43	62301	CGTGCGGGTG	CTGGAGAGCC	GCGAGATGGC	CGTGGCGGCG	CGTCGCCTCG
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	62551	CTTGTCACCC	AGCGCCGCCC	cgggcccgc	TCCCTCCTCG	ACGTGGCCTG
	62601	CGGAACGGGG	ATGCACCTGC	GGCACCTCGG	CGACCTCTTC	GAGGAGGTGG
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					15/23		
		62701	CCGGAGGCCG	GCATCCACCG	GGGGGACATG	CGGGACTTCG	CCCTCGGCCG
		62751	CCGCTTCGAC	GCCGTGATCT	GCATGTTCAG	TTCCATCGGG	CACATGCGCG
	5	62801	ACCAGCGGGA	ACTGGACGCG	GCGATCGGCC	GGTTCGCCGC	GCACCTGCCG
		62851	TCCGGCGGGG	TCGTGATCGT	CGATCCCTGG	TGGTTCCCGG	AGACGTTCAC
10	0	62901	ACCGGGGTAC	GTCGGCGCGA	GCCTCGTCGA	GGCCGAGGGC	CGCACCATCG
1	·	62951	CGCGCTTCTC	CCACTCCGCG	CTCGAGGACG	GCGCGACCCG	GATCGATGTG
		63001	GACTACCTCG	TCGGCGTGCC	GGGGGAGGGG	GTGCGGCACT	TGAAGGAGAC
1	5	63051	CCATCGGATC	ACGCTTTTCG	GGCGTGCGCA	GTACGAGGCG	GCCTTCACCG
		63101	CGGCGGGGAT	GTCCGTCGAG	TACCTCCCGC	ACGCCGCCAC	CGACCGCGGA
		63151	CTCTTCGTCG	GCGTCCAGGC	CTGA		

16/23

5	1	MKGIILAGGS	GTRLRPLTGA	LSKQLLPVYD	KPMIYYPLSV	LMLAGIRDIQ
	51	IITSKTHLEM	FRSLLGDGSR	IGISVGYAEQ	EEPRGIAEAF	LIGEEHIGDD
	101	PVALILGDNV	FHGPGFSSVL	ASTAARLDGC	ELFGYPVKDP	RRYGVGEVDA
0	151	EGRLVSLEEK	PEKPRSHLAV	TGLYFYDNGV	VDIARRLTPS	PRGELEITDV
	201	NKVYLEQGRA	RMTELGRGFA	WLDMGTHSSL	LQAGQYVQLL	EQRQGVRISC
	251	VEEIALRMGY	ISARQCHELG	RELESSSYGR	YLMDVAETLM	SGPAA

17/23

Figure 11

5	1	MRLLVTGGA	G FIGSHFVRQ	L LAGAYPDLA	G ARTVVVDKL	T YAGNLANLDP
-	51	VADHPSLEFV	HADIRDAEVM	SRVVRGADVV	VHFAAESHVD	RSIADASAFV
	101	ETNVRGTQVL	LQAAVEAGAG	RFVHVSTDEV	YGSIAEGSWR	EEQPLAPNSP
0	151	YAASKAASDL	LALAYHRTYG	LPVVVTRCSN	NYGPYQHPEK	VVPLFATNLL
	201	DGLTVPLYSD	GGNSRDWLHV	DDHCRGISLV	ATRGRPGEVY	HIGGGTELTN
5	251	RELTKRLLGL	CGADASSVRH	VADRPGHDLR	YALDIGKITG	ELGYAPRTDF
-	301	TTGLADTVRW	YAENRAWWEP	LKKAAQEARR	TD	

)

18/23

Figure 12

5	1	VSTPSAPPVE	P GAPSPAGHPI	D EGLWVRRYRI	P VRDPELRLVO	: FPHAGGAAT
,	51	FAALARGLDE	TVEALAVQYP	GRQDRRHEPF	IPSISGLVDQ	VVPEILRWAD
	101	RPLALFGHSM	GATVAFEVAR	RLRGSGQASP	VHLLVSGRRA	PTVRRRDVAH
10	151	LLDDDALIAE	IATLQGTEDA	VLQDEELLRL	ALPAIRNDYR	AAGTYAYVPG
	201	GALDCPVTVL	TGDRDPDVPL	EEARAWRELT	TGPFALHTFA	GGHFYLNDRM
15	251	DEVCRTIGDA	LAGTATADTA	TGTVPPRTAA	DTSTGPVPPR	TAADTAREPV
1.5	301	PPRSAPAPHG	AARRRADAVR	PGDPVDTARR	VLVSARTADS	AVTPFDGISG
	351	WLAERLRAGR	FDVSRVPFAE	LRGWSFHPGT	GNLHHASGRF	FSVEGLHVRT
20	401	DRLPERGWTQ	PIIVQPEVGL	LGIVAREIDG	VLHFLMQAKM	EPGNVNVLQV
	451	SPTVQATRSN	FTGVHRGRDI	RYLDLFMGPR	RARVLVDSIQ	SEQADWFLAK
25	501	RNRNMIVELA	ADDDLDIGED	FRWLTLGQLR	RLLMLDNVVN	MDARSILACL
23	551	PTADADASAP	SPVLRSFFGS	PGAARHTTAE	VLTWFTGVRA	LRELVQNRVP
	601	LDTVTADGWY	RTPHEIAHES	GRHFRVMAAE	VSASSREVTS	WTQPLIEPRL
30	651	PGLMALLVKS	VDGVLHALVR	ARVDVGHLNV	AELAPTVQCR	PQEHTGPRGL
	701	PGPPYLEDVL	SAPPQDVRYD	AVQSEEGGRF	FHAQNRYVIV	EVPHDFPEDA
35	751	PDDFAWLSLG	QLTGLLAHGN	YLNIELRTLV	ACAHTLY	

19/23

Figure 13

5	1	MVNDPMPRGS	GSGSVVVLG	G AGYVGRHVC	A AFAARGRDV	VVGRRPPEEP
	51	MPYRCVTLDL	AGTDPAALAA	ALDAERPDTI	VNSVGSIWGR	TDEQMWSATA
0	101	VPTLRLLEAL	ALMSARPRLV	HLGSVLEYGP	VTPGGSVGAD	AVPRPDTAYG
υ	151	RSKLAASEAV	LRGTSGGWVD	GVVLRVSNVS	GPGTPRISLL	GQVAERLLAA
	201	AGTGAEAVVE	LSRLRAHRDY	VDVRDVADAV	VAAARAPAVP	VAVGIGRGEA
5	251	VAVRDLVGLF	IEASGIPARV	VERPAPGRAP	GHREDWLRVD	TGAARALLGW
	301	APRRSLRESV	RDCWHDLVRA	HRLPTTPSKH	SGG	

20/23

Figure 14

5	1	VTTYVWDYLA	A EYQNERADL	L DAVETVFASO	QLVLGPSVD	FEKEFADYHG
	51	LRHCGGVDNG	TNAVKLGLQA	LGVGPGDEVV	TVSNTAAPTV	VAIDGTGATP
10	101	VFVDVRAEDH	LMDTDQVADV	ITPRTKALLP	VHLYGQCVDM	APLRALAEQH
10	151	GLVVLEDCAQ	AHGARHHGEL	AGTLGDAAAF	SFYPTKVLGA	YGDGGAVLTD
	201	DADVDRALRR	LRYYGMEDVY	YVVQTPGHNS	RLDEVQAEIL	RRKLTRLDRY
15	251	IEGRRAVARR	YAEGLANLTG	PGGLVLPSVT	EGNDHVYYVY	VVRHPRRDDI
	301	IEALKSYGIS	LNISYPWPVH	TMTGFAHLGY	AKGSLPVTER	LADEIFSLPM
20	351	YPGLAPDVQD	KVIAALHEVL	ATL		

21/23

Figure 15

5	1	VSPAPATEDP	AAAGRRLQLT	RAAQWFAGTQ	DDPYALVLRA	EATDPAPYE
	51	RIRAHGPLFR	SDLLDTWVTA	SRAVADEVIT	SPAFDGLTAD	GRRPGAREL
10	101	LSGTALDADR	ATCARFGALT	AWGGPLLPAP	HERALRESAE	RRAHTLLDGA
	151	EAALAADGTV	DLVDAYARRL	PALVLREQLG	VPEEAATAFE	DALAGCRRTI
	201	DGALCPQLLP	DAVAGVRAEA	ALTAVLASAL	RGTPAGRAPD	AVAAARTLAV
15	251	AAAEPAATLV	GNAVQELLAR	PAQWAELVRD	PRLAAAAVTE	TLRVAPPVRI
	301	ERRVAREDTD	IAGQRLPAGG	SVVILVAAVN	RAPVSAGSDA	STTVPHAGGI
20	351	PRTSAPSVPS	APFDLTRPVA	APGPFGLPGD	LHFRLGGPLV	GTVAEAALG
	401	LAARLPGLRA	AGPAVRRRRS	PVLHGHARLP	VAVARTARDL	PATAPRN

22/23

Figure 16

5	1	MRILLTSFAH	NTHYYNLVPL	GWALRAAGHD	VRVASQPSLT	GTITGSGLTA
	51	VPVGDDTAIV	ELITEIGDDL	VLYQQGMDFV	DTRDEPLSWE	HALGQQTIMS
	101	AMCFSPLNGD	STIDDMVALA	RSWKPDLVLW	EPFTYAGPVA	AHACGAAHAR
10	151	LLWGPDVVLN	ARRQFTRLLA	ERPVEQREDP	VGEWLTWTLE	RHGLAADADT
	201	IEELFAGQWT	IDPSAGSLRL	PVDGEVVPMR	FVPYNGASVV	PAWLSEPPAR
15	251	PRVCVTLGVS	TRETYGTDGV	PFHELLAGLA	DVDAEIVATL	DAGQLPDAAG
	301	LPGNVRVVDF	VPLDALLPSC	AAIVHHGGAG	TCFTATVHGV	PQIVVASLWD
	351	APLKAHQLAE	AGAGIALDPG	ELGVDTLRGA	VVRVLESREM	AVAARRLADE
20	401	MLAAPTPAAL	VPRLERLTAA	HRRA		

23/23

5	1	MNLEYSGDIA	RLYDLVHQGK	GKDYRAEAEE	LAALVTQRRP	GARSLLDVAC
10	51	GTGMHLRHLG	DLFEEVAGVE	MSPDMLAIAQ	RRNPEAGIHR	GDMRDFALGR
	101	RFDAVICMFS	SIGHMRDQRE	LDAAIGRFAA	HLPSGGVVIV	DPWWFPETFT
	151	PGYVGASLVE	AEGRTIARFS	HSALEDGATR	IDVDYLVGVP	GEGVRHLKET
	201	HRITLFGRAQ	YEAAFTAAGM	SVEYLPHAAT	DRGLFVGVQA	
15						